Literacy Standards for Science: Reading

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| Reading Standard | How it Relates to Science: (Inquiry Wheel and/or 5E Learning Cycle) | Students show success (S) or weakness (W) | Possible Activities to Build Strategic Literacy |
| Cite specific textual evidence to support analysis  of science and technical texts. |  |  | Summary with Details GIST  Note-taking systems |
| Determine the central ideas or conclusions of a  text; provide an accurate summary of the text  distinct from prior knowledge or opinions. |  |  | KWL  List, Group, Label  Anticipation Guide |
| Follow precisely a multistep procedure when  carrying out experiments, taking measurements,  or performing technical tasks. |  |  | Lab activities |
| Determine the meaning of symbols, key terms,  and other domain-specific words and phrases as  they are used in a specific scientific or technical  context relevant to *grades 6–8 texts and topics.* |  |  | Guess and Adjust  Frayer Model  Word Webs  Semantic Feature Map  Word Studies |
| Analyze the structure an author uses to organize a  text, including how the major sections contribute  to the whole and to an understanding of the topic. |  |  | Teach text structures and text features  Content Brainstorming |
| Analyze the author’s purpose in providing an  explanation, describing a procedure, or discussing  an experiment in a text. |  |  | EXPLORE |
| Integrate quantitative or technical information  expressed in words in a text with a version of that  information expressed visually (e.g., in a flowchart,  diagram, model, graph, or table). |  |  | Mapping  Webbing  Graphic Organizers |
| Distinguish among facts, reasoned judgment  based on research findings, and speculation in a  text. |  |  | Text Highlighting |
| Compare and contrast the information gained  from experiments, simulations, video, or  multimedia sources with that gained from reading  a text on the same topic. |  |  | I-Chart  Text-to-text comparison |
| By the end of grade 8, read and comprehend  science/technical texts in the grades 6–8 text  complexity band independently and proficiently. |  |  | Wide – and VARIED - reading |

Literacy Standards for Science: Writing

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| Writing Standard | How it Relates to Science: (Inquiry Wheel and/or 5E Learning Cycle) | Students show success (S) or weakness (W) | Possible Activities to Build Strategic Literacy |
| 1. Write arguments focused on discipline-specific content.  a. Introduce claim(s) about a topic or issue, acknowledge and distinguish the claim(s) from alternate or opposing claims, and organize the reasons and evidence logically.  b. Support claim(s) with logical reasoning and relevant, accurate data and evidence that demonstrate an understanding of the topic or text, using credible sources.  c. Use words, phrases, and clauses to create cohesion and clarify the relationships among claim(s), counterclaims, reasons, and evidence.  d. Establish and maintain a formal style.  e. Provide a concluding statement or section that follows from and supports the argument presented. |  |  | Utilize the writing process: Prewriting, Drafting, Revising, Editing, Publishing |
| Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes.  a. Introduce a topic clearly, previewing what is to follow; organize ideas, concepts, and information into broader categories as  appropriate to achieving purpose; include formatting (e.g., headings), graphics (e.g., charts, tables), and multimedia when useful to aiding comprehension.  b. Develop the topic with relevant, well-chosen facts, definitions, concrete details, quotations, or other information and examples.  c. Use appropriate and varied transitions to create cohesion and clarify the relationships among ideas and concepts.  d. Use precise language and domain-specific vocabulary to inform about or explain the topic.  e. Establish and maintain a formal style and objective tone.  f. Provide a concluding statement or section that follows from and supports the information or explanation presented. |  |  | Utilize the writing process: Prewriting, Drafting, Revising, Editing, Publishing |
| *NOTE: This is not a separate standard for the content areas: Students’ narrative skills continue to grow in these grades. The Standards require that students be able to incorporate narrative elements effectively into arguments and informative/explanatory texts. In history/social studies, students must be able to incorporate narrative accounts into their analyses of individuals or events of historical import. In science and technical subjects, students must be able to write precise enough descriptions of the step-by-step procedures they use in their investigations or technical work that others can replicate them and (possibly) reach the same results.* |  |  |  |
| Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. |  |  | Bellringers, exit slips, constructed responses, Predict-O-Grams |
| With some guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on how well purpose and audience have been addressed. |  |  | Conference with peers and teachers |
| Use technology, including the Internet, to produce and publish writing and present the relationships between information and ideas clearly and efficiently. |  |  | Use technology beyond word processing to share information: glogster, movie maker, podcasts, etc. |
| Conduct short research projects to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for  multiple avenues of exploration. |  |  | I-Chart  Text-to-Text |
| Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following  a standard format for citation. |  |  | Teach research strategies |
| Draw evidence from informational texts to support analysis, reflection, and research. |  |  | Use folders with envelopes to structure information gathering |
| Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and  audiences. |  |  | Use informal and formal writing to address routine writing. |